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ARTICLE 2.0000 AIR POLLUTION CONTROL REGULATIONS AND PROCEDURES

Section 2.1400 Nitrogen Oxides

SECTION 2.1400 NITROGEN OXIDES

2.1401 DEFINITIONS

(a) For the purpose of this Section, the definitions at N.C.G.S 143-212 and 143-213, and MCAPCO Regulation 2.0101 - "Definitions" shall apply, and in addition the following definitions apply. If a term in this Regulation is also defined at MCAPCO Regulation 2.0101 - "Definitions", then the definition in this Regulation controls.

(1) **"Acid rain program"** means the federal program for the reduction of acid rain including 40 CFR Parts 72, 75, 76, and 77.

(2) **"Actual emissions"** means for MCAPCO Regulations 2.1416 - "Emission Allocations for Utility Companies" through 2.1422 - "Compliance Supplement Pool Credits", emissions of nitrogen oxides as measured and calculated according to 40 CFR Part 75, Subpart H.

(3) **"Actual heat input"** means for MCAPCO Regulations 2.1416 - "Emission Allocations for Utility Companies" through 2.1422 - "Compliance Supplement Pool Credits", heat input as measured and calculated according to 40 CFR Part 75, Subpart H.

(4) **"Averaging set of sources"** means all the stationary sources included in an emissions averaging plan according to MCAPCO Regulation 2.1410 - "Emissions Averaging".

(5) **"Averaging source"** means a stationary source that is included in an emissions averaging plan in accordance to MCAPCO Regulation 2.1410 - "Emissions Averaging".

(6) **"Boiler"** means an enclosed fossil or other fuel-fired combustion device used to produce heat and to transfer heat to recirculating water, steam, or other medium.

(7) **"Combined cycle system"** means a system consisting of one or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

(8) **"Combustion turbine"** means an enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor, and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

(9) **"Diesel engine"** means a compression ignited two- or four-stroke engine in which liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition.

(10) **"Dual fuel engine"** means a compression ignited stationary internal combustion engine that is burning liquid fuel and gaseous fuel simultaneously.

(11) **"Emergency generator"** means a stationary internal combustion engine used to generate electricity only during:

- (A) the loss of primary power at the facility that is beyond the control of the owner or operator of the facility or
- (B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.

An emergency generator may be operated periodically to ensure that it will operate.

(12) **"Emergency use internal combustion engines"** means stationary internal combustion engines used to drive pumps, aerators, and other equipment only during:

- (A) the loss of primary power at the facility that is beyond the control of the owner or

operator of the facility
or

(B) maintenance when maintenance is being performed on the power supply to equipment that is essential in protecting the environment or to such equipment itself.

An emergency use internal combustion engine may be operated periodically to ensure that it will operate.

(13) **"Excess emissions"** means an emission rate that exceeds the applicable limitation or standard; for the purposes of this definition, nitrogen oxides emitted by a source covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies", 2.1417 - "Emission Allocations for Large Combustion Sources", or 2.1418 - "New Generating Units, Large Boilers, and large I/C Engines during the ozone season above its allocation, as may be adjusted under MCAPCO Regulation 2.1419 - "Nitrogen Oxide Budget Trading Program", are not considered excess emissions.

(14) **"Fossil fuel fired"** means

(A) For sources that began operation before January 1, 1996, where fossil fuel actually combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1995, or, if a source had no heat input in 1995, during the last year of operation of the unit before 1995;

(B) For sources that began operation on or after January 1, 1996 and before January 1, 1997, where fossil fuel actually combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during 1996;
or

(C) For sources that began operation on or after January 1, 1997:

(i) Where fossil fuel actually combusted either alone or in combination with any other fuel, comprises more than 50 percent of the annual heat input on a Btu basis during any year;
or

(ii) Where fossil fuel combusted either alone or in combination with any other fuel, is projected to comprise more than 50 percent of the annual heat input on a Btu basis during any year, provided that the unit shall be "fossil fuel-fired" as of the date, during such year, on which the source begins combusting fossil fuel.

(15) **"Indirect-fired process heater"** means an enclosed device using controlled flame where the device's primary purpose is to transfer heat by indirect heat exchange to a process fluid, a process material that is not a fluid, or a heat transfer material, instead of steam, for use in a process.

(16) **"Lean-burn internal combustion engine"** means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration greater than one percent.

(17) **"NO_x"** means nitrogen oxides.

(18) **"Ozone season"** means the period beginning May 31 and ending September 30 for 2004 and beginning May 1 and ending September 30 for all other years.

(19) **"Potential emissions"** means the quantity of NO_x that would be emitted at the maximum

capacity of a stationary source to emit NO_x under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit NO_x shall be treated as a part of its design if the limitation is federally enforceable. Such physical or operational limitations include air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed.

(20) **"Projected seasonal energy input"** means the maximum design heat input per hour times 3300 hours.

(21) **"Projected seasonal energy output"** means the maximum design energy output per hour times 3300 hours.

(22) **"Reasonable assurance"** means a demonstration to the Director that a method, procedure, or technique is possible and practical for a source or facility under the expected operating conditions.

(23) **"Reasonably Available Control Technology"** or **"RACT"** means the lowest emission limitation for NO_x that a particular source can meet by the application of control technology that is reasonably available considering technological and economic feasibility.

(24) **"Reasonable effort"** means the proper installation of technology designed to meet the requirements of MCAPCO Regulation 2.1407 - "Boilers and Indirect-fired Process Heaters", 2.1408 - "Stationary Combustion Turbines", or 2.1409 - "Stationary Internal Combustion Engines" and the utilization this technology, according to the manufacturer's recommendations or other similar guidance for not less than six months, in an effort to meet the applicable limitation for a source.

(25) **"Rich-burn internal combustion engine"** means a spark ignition internal combustion engine originally designed and manufactured to operate with an exhaust oxygen concentration less than or equal to one percent.

(26) **"Seasonal energy input"** means the total energy input of a combustion source during the period beginning May 1 and ending September 30.

(27) **"Seasonal energy output"** means the total energy output of a combustion source during the period beginning May 1 and ending September 30.

(28) **"Shutdown"** means the cessation of operation of a source or its emission control equipment.

(29) **"Source"** means a stationary boiler, combustion turbine, combined cycle system, reciprocating internal combustion engine, indirect-fired process heater, or a stationary article, machine, process equipment, or other contrivance, or combination thereof, from which nitrogen oxides emanate or are emitted.

(30) **"Startup"** means the commencement of operation of any source that has shutdown or ceased operation for a period sufficient to cause temperature, pressure, process, chemical, or pollution control device imbalance that would result in excess emissions.

(31) **"Stationary internal combustion engine"** means a reciprocating internal combustion engine that is not self propelled; however, it may be mounted on a vehicle for portability.

(b) Whenever reference is made to the Code of Federal Regulations in this Section, the definitions in the Code of Federal Regulations shall apply unless specifically stated otherwise in a particular Regulation.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 15, 2002.

2.1402 APPLICABILITY

(a) The Regulations of this Section do not apply except as specifically set out in this Regulation. MCAPCO Section 2.2400 applies rather than the nitrogen oxide (NOx) state implementation plan (SIP) call (40 CFR 51.121) provisions of MCAPCO Regulations 2.1402 – "Applicability" Paragraph (c) and (h), 2.1403 – "Compliance Schedules" Paragraph (a) and (d) through (e), 2.1404 – "Recordkeeping: Reporting: Monitoring" Paragraph (a),(b), and (d) through (j), 2.1409 – "Stationary Internal Combustion Engines" Paragraph (c), (d), and (h), and 2.1416 – "Emission Allocations For Utility Companies" through 2.1423 – "Large Internal Combustion Engines"

(b) The requirements of this Section apply to all sources May 1 through September 30 of each year.

(c) MCAPCO Regulation 2.1409 - "Stationary Internal Combustion Engines" Paragraph (c) and 2.1416 - "Emissions Allocations for Utility Companies" through 2.1423 - "Large Internal Combustion Engines" apply statewide.

(d) MCAPCO Regulations 2.1407 - "Boilers and Indirect-fired Process Heaters", 2.1408 - "Stationary Combustion Turbines", 2.1409 - "Stationary Internal Combustion Engines" Paragraph (b), and 2.1413 - "Sources not Otherwise Listed in this Section" apply to facilities with potential emissions of nitrogen oxides equal to or greater than 100 tons per year or 560 pounds per calendar day beginning May 1 through September 30 of any year in Mecklenburg County

(e) *(Not adopted by reference as the paragraph in the state rule regulated areas outside of Mecklenburg County)*

(f) *(Not adopted by reference as the paragraph in the state rule regulated areas outside of Mecklenburg County)*

(g) If the State nonattainment plan for ozone has failed to attain the ambient air quality standard for ozone and does not qualify for extension of the attainment date in the Charlotte-Gastonia-Rock Hill ozone nonattainment area, the regulations in this Section shall apply to facilities in Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan, and Union Counties and Davidson and Coddle Creek townships in Iredell County with the potential to emit at least 50 tons of nitrogen oxides per year. Once the nonattainment plan for ozone has failed and the area does not qualify for an extension of the attainment date, the Director of the North Carolina Department of Environment and Natural Resources – Department of Air Quality (NCDENR-DAQ) shall notice the

applicability of these rules to these facilities in the North Carolina Register and the Director of Mecklenburg County Air Quality shall send written notification to all permitted facilities within the counties in which the rules are being implemented that are or may be subject to the requirements of this Section informing them that they are or may be subject to the requirements of this Section. Compliance shall be according to MCAPCO Regulation 2.1403 – "Compliance Schedules".

(h) Regardless of any other statement of applicability of this Section, this Section does not apply to any:

(1) source not required to obtain an air permit under MCAPCO 1.5211 - "Applicability" or is an insignificant activity as defined at MCAPCO 1.5102 - "Definition of Terms" Paragraph (42) - "Insignificant Activities";
(2) incinerator or thermal or catalytic oxidizer used primarily for the control of air pollution;
(3) emergency generator;
(4) emergency use internal combustion engine;
(5) stationary internal combustion engine less than 2400 brake horsepower that operates no more than the following hours between May 1 and September 30:
    (A) for diesel engines:

$$t = \frac{833{,}333}{ES}$$

    (B) for natural gas-fired engines:

$$t = \frac{700{,}280}{ES}$$

where *t* equals time in hours and ES equals engine size in horsepower.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1997; July 1, 1995; April 1, 1995.
Temporary Amended Eff.; November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amended Eff. August 1, 2001;
Amended Eff. June 1, 2008; July 1, 2007; March 1, 2007; July 15, 2002;
Temporary Amended Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009
Ammended Eff. January 1, 2010

2.1403 COMPLIANCE SCHEDULES

(a) Applicability. This Regulation applies to sources covered by Paragraph (d), (e), (f), or (g) of MCAPCO Regulation 2.1402 – "Applicability".

(b) Maintenance area and Charlotte ozone nonattainment area contingency plan. The owner or operator of a source subject to this Regulation because of the applicability of Paragraph (e), (f), or (g) of MCAPCO Regulation 2.1402 shall adhere to the following increments of progress and schedules:

(1) If compliance with this Section is to be achieved through a demonstration to certify compliance without source modification:
   (A) The owner or operator shall notify the Director (Mecklenburg County Air Quality hereafter identified as MCAQ) in writing within six months after the Director of the North Carolina Department of Environment and and Natural Resources-Division of Air Quality's (hereafter identified as NCDENR-DAQ) notice in the North Carolina Register that the source is in compliance with the applicable limitation or standard;
   (B) The owner or operator shall perform any required testing, according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures", within 12 months after the Director's (NCDENR-DAQ) notice in the North Carolina Register to demonstrate compliance with the applicable limitation; and
   (C) The owner or operator shall implement any required recordkeeping and reporting requirements, according to MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring", within 12 months after the Director's (NCDENR-DAQ) notice in the North Carolina Register to demonstrate compliance with the applicable limitation.

(2) If compliance with this Section is to be achieved through the installation of combustion modification technology or other source modification:
   (A) The owner or operator shall submit a permit application and a compliance schedule within six months after the Director's (NCDENR-DAQ) notice in the North Carolina Register.
   (B) The compliance schedule shall contain the following increments of progress:
      (i) a date by which contracts for installation of the modification shall be awarded or orders shall be issued for purchase of component parts;
      (ii) a date by which installation of the modification shall begin;
      (iii) a date by which installation of the modification shall be completed; and
      (iv) if the source is subject to a limitation, a date by which compliance testing shall be completed.
   (C) Final compliance shall be achieved within three years after the Director's (NCDENR-DAQ) notice in the North Carolina Register unless the owner or operator of the source petitions the Director (MCAQ) for an alternative limitation according to MCAPCO Regulation 2.1412 - "Petition for Alternative Limitations". If such a petition is made, final compliance shall be achieved

within four years after the Director's (NCDENR-DAQ) notice in the North Carolina Register.

(3) If compliance with this Section is to be achieved through the implementation of an emissions averaging plan as provided for in MCAPCO Regulation 2.1410 - "Emissions Averaging":
   (A) The owner or operator shall abide by the applicable requirements of Subparagraphs (b)(1) or (b)(2) of this Regulation for certification or modification of each source to be included under the averaging plan.
   (B) The owner or operator shall submit a plan to implement an emissions averaging plan according to MCAPCO Regulation 2.1410 - "Emissions Averaging" within six months after the Director's (NCDENR-DAQ) notice in the North Carolina Register.
   (C) Final compliance shall be achieved within one year after the Director's (NCDENR-DAQ) notice in the North Carolina Register unless implementation of the emissions averaging plan requires the modification of one or more of the averaging sources. If modification of one or more of the averaging sources is required, final compliance shall be achieved within three years.

(4) If compliance with this Section is to be achieved through the implementation of a seasonal fuel switching program as provided for in MCAPCO Regulation 2.1411 - "Seasonal Fuel Switching":
   (A) The owner or operator shall make all necessary modifications according to Subparagraph (b)(2) of this Regulation.
   (B) The owner or operator shall include a plan for complying with the requirements of MCAPCO Regulation 2.1411 - "Seasonal Fuel Switching" with the permit application required under Part (A) of this Subparagraph.
   (C) Final compliance shall be achieved within three years after the Director's (NCDENR-DAQ) notice in the North Carolina Register.

(5) Increments of progress certification. The owner or operator shall certify to the Director (MCAQ), within five days after the deadline for each increment of progress in this Paragraph, whether the required increment of progress has been met.

(c) Nonattainment areas. The owner or operator of a source subject to this Regulation because of the applicability of MCAPCO Regulation 2.1402 Paragraph (d) shall adhere to the following:

(1) If compliance with this Section is to be achieved through a demonstration to certify compliance without source modification:
   (A) The owner or operator shall notify the Director (MCAQ) in writing by August 1, 2007;
   (B) The owner or operator shall perform any required testing, according to MCAPCO Regulation 2.1415 – "Test Methods and Procedures" by January 1, 2008 and
   (C) The owner or operator shall implement any required recordkeeping and reporting requirements, according to MCAPCO Regulation 2.1404 – "Recordkeeping: Recording: Monitoring" by January 1, 2008.

(2) If compliance with this Section is to be achieved through the installation of combustion modification technology or other source modification:
    (A) The owner or operator shall submit a permit application and a compliance schedule by August 1, 2007.
    (B) The compliance schedule shall contain a date by which contracts for installation of the modification shall be awarded or orders shall be issued for purchase of component parts,
    (C) The compliance schedule shall contain a date by which installation of the modification shall begin,
    (D) The compliance schedule shall contain a date by which installation of the modification shall be completed,
    (E) If the source is subject to a limitation, the compliance schedule shall contain a date by which compliance testing shall be completed,
    (F) Final compliance shall be achieved no later than April 1, 2009.
(3) If compliance with this Section is to be achieved through the implementation of an emissions averaging plan as provided in MCAPCO Regulation 2.1410 – "Emissions Averaging":
    (A) The owner or operator shall abide by the applicable requirements of Subparagraph (c)(1) or (c)(2) of this Regulation for certification or modification of each source to be included under the averaging plan;
    (B) The owner or operator shall submit a plan to implement an emissions averaging plan according MCAPCO Regulation 2.1410 by August 1, 2007,
    (C) Final compliance shall be achieved within one year no later than January 1, 2008.
(4) If compliance with this Section is to be achieved through the implementation of a seasonal fuel switching program as provided for in MCAPCO Regulation 2.1411 – "Seasonal Fuel Switching":
    (A) The owner or operator shall make all necessary modifications according to Subparagraph (c)(2) of this Regulation
    (B) The owner or operator shall include a plan for complying with the requirements of MCAPCO Regulation 2.1411 with the permit application required under Part (A) of this Subparagraph
    (C) Final compliance shall achieved no later than April 1, 2009.
(5) Increments of progress certification. The owner or operator shall certify to the Director (MCAQ), within five days after the deadline for each increment of progress in this Paragraph, whether the required increment of progress has been met.

(d) Sources already in compliance.
    (1) Maintenance area and Charlotte ozone nonattainment area contingency plan. Paragraph (b) of this Regulation shall not apply to sources that are in compliance with applicable Regulations of this Section when the Director (NCDENR-DAQ) notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone and that have determined and certified

compliance to the satisfaction of the Director (MCAQ) within six months after the Director (NCDENR-DAQ) notices the implementation of rules in the North Carolina Register that resolves a violation of the ambient air quality standard for ozone

(2) Nonattainment areas. Paragraph (c) of this Regulation shall not apply to sources in an area named MCAPCO Regulation 2.1402 – "Applicability" Paragraph (d) that are in compliance with applicable Regulations of this Section on March 1, 2007.

(e) New sources.

(1) Maintenance area and Charlotte ozone nonattainment area contingency plan. The owner or operator of any new source of nitrogen oxides not permitted as of the date the Director (NCDENR-DAQ) notices in the North Carolina Register according to Paragraph (e), (f), or (g) of MCAPCO Regulation 2.1402 - "Applicability", shall comply with all applicable Regulations in this Section upon start-up of the source. The owner or operator of any new source covered under MCAPCO Regulations 2.1407 - "Boilers and Indirect-fired Process Heaters", 2.1408 - ", 2.1409 - "Stationary Internal Combustion Engines", 2.1413 - "Sources Not Otherwise Listed in this Section", or 2.1418 - "New Electric Generating Units, Large Boilers and Large I/C Engines" shall comply with all applicable Regulations in this Section upon start-up of the source.

(2) Nonattainment areas. The owner or operator of any new source nitrogen oxides not permitted before March 1, 2007 in an area identified in Paragraph (d) of MCAPCO 2.1402 shall comply with all applicable Regulations in this Section upon start-up of the source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Amended Eff. April 1, 1997.
Temporary Amendment Eff. November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff August 1, 2001;
Amended Eff. July 1, 2007; March 1, 2007; July 15, 2002.

2.1404 RECORDKEEPING: REPORTING: MONITORING

(a) General requirements. The owner or operator of any source shall comply with the monitoring, recordkeeping and reporting requirements in MCAPCO Section 2.0600 - "Monitoring: Recordkeeping: Reporting" and shall maintain all records necessary for determining compliance with all applicable limitations and standards of this Section for five years.

(b) Submittal of information to show compliance status. The owner or operator of any source shall maintain and, when requested by the Director, submit any information required by this Section to determine the compliance status of an affected source.

(c) Excess emissions reporting. The owner or operator shall report excess emissions following the procedures under MCAPCO Regulation 2.0535 - "Excess Emissions Reporting and Malfunctions".

(d) Continuous emissions monitors.

(1) The owner or operator shall install, operate, and maintain a continuous emission monitoring system according to 40 CFR Part 75, Subpart H, with such exceptions as may be allowed under 40 CFR Part 75, Subpart H or 40 CFR Part 96 if the source is covered under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" except internal combustion engines.

(2) The owner or operator of a source that is subject to the requirements of this Section but not covered under Subparagraph (1) of this Paragraph and that uses a continuous emissions monitoring system to measure emissions of nitrogen oxides shall operate and maintain the continuous emission monitoring system according to 40 CFR Part 60, Appendix B, Specification 2, and Appendix F or Part 75, Subpart H. If diluent monitoring is required, 40 CFR Part 60, Appendix B, Specification 3, shall be used. If flow monitoring is required, 40 CFR Part 60, Appendix B, Specification 6, shall be used.

(3) The owner or operator of the following sources is not required to use continuous emission monitors unless the Director determines that a continuous emission monitor is necessary under MCAPCO Regulation 2.0611 - Monitoring Emissions from Other Sources" to show compliance with the Regulations of this Section:

(A) a boiler or indirect-fired process heater covered under MCAPCO Regulation 2.1407 - "Boilers and Indirect-Fired Process Heaters" with a maximum heat input less than or equal to 250 million Btu per hour;

(B) stationary internal combustion engines covered under MCAPCO Regulation 2.1409 - "Stationary Internal Combustion Engines" except for engines covered under MCAPCO Regulation 2.1409 Paragraph (b) and MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C".

(e) Missing data.

(1) If data from continuous emission monitoring systems required to meet the requirements of 40 CFR Part 75 are not available at a time that the source is operated, the procedures in 40 CFR Part 75 shall be used to supply the missing data.

(2) For continuous emissions monitors not covered under Subparagraph (1) of this Paragraph, data shall be available for at least 95 percent of the emission sources operating hours for the applicable averaging period, where four equally spaced readings constitute a valid hour. If data from continuous emission monitoring systems are not available for at least 95 percent of the time that the source is operated, the owner or operator of the monitor shall:

(A) use the procedures in 40 CFR 75.33 through 75.37 to supply the missing data; or

(B) document that the combustion source or process equipment and the control

device were being properly operated (acceptable operating and maintenance procedures are being used, such as, compliance with permit conditions, operating and maintenance procedures, and preventative maintenance program, and monitoring results and compliance history) when the monitoring measurements were missing.

(f) Quality assurance for continuous emissions monitors.

(1) The owner or operator of a continuous emission monitor required to meet 40 CFR Part 75, Subpart H, shall follow the quality assurance and quality control requirements of 40 CFR Part 75, Subpart H.

(2) For a continuous emissions monitor not covered under Subparagraph (1) of this Paragraph, the owner or operator of the continuous emissions monitor shall follow the quality assurance and quality control requirements of 40 CFR Part 60, Appendix F, if the monitor is required to be operated annually under another Regulation. If the continuous emissions monitor is being operated only to satisfy the requirements of this Section, then the quality assurance and quality control requirements of 40 CFR Part 60, Appendix F, shall apply except that:

(A) A relative accuracy test audit shall be conducted after January 1 and before May 1 of each year;

(B) One of the following shall be conducted at least once between May 1 and September 30 of each year:

(i) a linearity test, according to 40 CFR Part 75, Appendix A, Section 3.2, 6.2, and 7.1;

(ii) a relative accuracy audit, according to 40 CFR Part 60, Appendix F, Section 5 and 6; or

(iii) a cylinder gas audit according to 40 CFR Part 60, Appendix F, Section 5 and 6;

and

(C) A daily calibration drift test shall be conducted according to 40 CFR Part 60, Appendix F, Section 4.0.

(g) Averaging time for continuous emissions monitors. When compliance with a limitation established for a source subject to the requirements of this Section is determined using a continuous emissions monitoring system, a 24-hour block average as described under MCAPCO Regulation 2.0606 - "Sources Covered by Appendix P of 40 CFR Part 51" shall be recorded for each day beginning May 1 through September 30 unless a specific Regulation requires a different averaging time or procedure. A 24-hour block average described in MCAPCO Regulation 2.0606 - "Sources Covered by Appendix P of 40 CFR Part 51" shall be used when a continuous emissions monitoring system is used to determine compliance with a short-term pounds-per-million-Btu standard in MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines".

(h) Heat input. Heat input shall be determined:

(1) for sources required to use a monitoring system meeting the requirements of 40 CFR Part 75, using the procedures in 40 CFR Part 75; or
(2) for sources not required to use a monitoring system meeting the requirements of 40 CFR Part 75 using:
    (A) 40 CFR Part 75,
    (B) a method in MCAPCO Regulation 2.0501 - "Compliance with Emission Control Standards",
    or
    (C) the best available heat input data if approved by the Director (the Director shall grant approval if he finds that the heat input data is the best available).

(i) Source testing. When compliance with a limitation established for a source subject to the requirements of this Section is determined using source testing, the source testing shall follow the procedures of MCAPCO Regulation 2.1415 - "Test Methods and Procedures".

(j) Alternative monitoring and reporting procedures. The owner or operator of a source covered under this Regulation may request alternative monitoring or reporting procedures under MCAPCO Regulation 2.0612 - "Alternative Monitoring and Reporting Procedures".

History Note: Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);
Eff. April 1, 1995;
Amended Eff. April 1, 1999.
Temporary Amendment Eff. November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. January 1, 2009; December 1, 2005; January 1, 2005; May 1, 2004; July 15, 2002.
Temporary Amendment Eff. December 31, 2008
Temporary Amendment expired September 29, 2009

2.1405 CIRCUMVENTION

(a) An owner or operator subject to this Section shall not build, erect, install or use any article, machine, equipment, process, or method which conceals an emission which would otherwise constitute a violation of an applicable Regulation.

(b) Paragraph (a) of this Regulation includes the use of gaseous diluent to achieve compliance and the piecemeal carrying out of an operation to avoid coverage by a Regulation that applies only to operations larger than a specified size.

History Note: *Statutory Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); Eff. April 1, 1995.*

2.1406 UTILITY BOILERS (REPEALED)

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5); Eff. April 1, 1995; Temporary Repeal Eff. August 1, 2001; November 1, 2000; Repealed Eff. July 15, 2002.*

2.1407 BOILERS AND INDIRECT-FIRED PROCESS HEATERS

(a) This rule applies geographically according to MCAPCO Regulation 2.1402 – "Applicability"

(b) The owner or operator of a boiler or indirect-fired process heater with a maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of MCAPCO Regulation 2.1414 - "Tune-Up Requirements". The owner or operator of a boiler or indirect-fired process heater subject to the requirements of this Paragraph shall maintain records of all tune-ups performed for each source according to MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring".

(c) The owner or operator of a fossil fuel-fired boiler with a maximum heat input rate less than or equal to 250 million Btu per hour but greater than 50 million Btu per hour, a boiler with a maximum heat input greater than 50 million Btu per hour that is not a fossil fuel-fired boiler, or an indirect-fired process heater with a maximum heat input greater than 50 million Btu per hour shall comply by:

(1) installation of, if necessary, combustion modification technology or other NO_x control technology and maintenance, including annual tune-ups and recordkeeping; and

(2) demonstration through source testing or continuous emission monitoring that the source complies with the following applicable limitation:

MAXIMUM ALLOWABLE NO_X EMISSION RATES FOR BOILERS AND INDIRECT PROCESS HEATERS
(POUNDS PER MILLION Btu)

	Firing Method		
Fuel/Boiler Type	**Tangential**	**Wall**	**Stoker or Other**
Coal (Wet Bottom)	1.0	1.0	N/A
Coal (Dry Bottom)	0.45	0.50	0.40
Wood or Refuse	0.20	0.30	0.20
Oil	0.30	0.30	0.30
Gas	0.20	0.20	0.20

(d) If the emissions are greater than the applicable limitation in Paragraph (c) of this Regulation after reasonable effort as defined in MCAPCO Regulation 2.1401 - "Definitions", or if the requirements of this Regulation are not RACT, the owner or operator may petition the Director for an alternative limitation or standard in accordance with MCAPCO Regulation 2.1412 - "Petition for Alternative Limitations".

(e) Compliance with the limitation established for a boiler or indirect-fired process heater under this Regulation shall be determined:

(1) using a continuous emission monitoring system if the boiler or indirect-fired process heater is required to use a continuous emissions monitoring system under MCAPCO Regulation 2.0524 - "New Source Performance Standards" or 40 CFR Part 60 to measure emissions of nitrogen oxides;
or

(2) using annual source testing according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures" for boilers or indirect-fired process heaters with a maximum heat input rate less than or equal to 250 million Btu per hour but greater than 50 million Btu per hour with the exception allowed under Paragraph (f) of this Regulation.

(f) If a source covered under this Regulation can burn more than one fuel, the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the sources testing required under Subparagraph (e)(3) this Regulation shall not be required for that fuel.

(g) If two consecutive annual source tests show compliance, the Director may reduce the frequency of testing up to once every five years. In years that a source test is not done, the boiler or indirect-fired process heater shall comply with the annual tune-up requirements of MCAPCO Regulation 2.1414 - "Tune-Up Requirements". If after the Director reduces the frequency of testing, a source test shows that the emission limit under this Regulation is exceeded, the Director shall require the boiler or indirect-fired process heater to be tested annually until two consecutive annual tests show compliance. Then the Director may again reduce the frequency of testing.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Amendment Eff. November 1, 2000;
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. June 1, 2008; July 15, 2002.
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009

2.1408 STATIONARY COMBUSTION TURBINES

(a) This regulation applies geographically according to MCAPCO Regulation 2.1402 – "Applicability".

(b) Unless the owner or operator chooses the option of emission averaging under MCAPCO Regulation 2.1410 - "Emissions Averaging", the owner or operator of a stationary combustion turbine with a heat input rate greater than 100 million Btu per hour but less than or equal to 250 million Btu per hour shall comply with the following limitations:

(1) Emissions of NO_x shall not exceed 75 ppm by volume corrected to 15 percent oxygen for gas-fired turbines
or
(2) Emissions of NO_x shall not exceed 95 ppm by volume corrected to 15 percent oxygen for oil-fired turbines.

If necessary, the owner or operator shall install combustion modification technology or other NO_x control technology to comply with the applicable limitation set forth in this Paragraph.

(c) If the emissions are greater than the applicable limitation in Paragraph (b) of this Regulation after reasonable effort as defined in MCAPCO Regulation 2.1401 - "Definitions", or if the requirements of this Regulation are not RACT for the particular stationary combustion turbine, the owner or operator may petition the Director for an alternative limitation or standard according to MCAPCO Regulation 2.1412 - "Petition for Alternative Limitations".

(d) Compliance with the limitation established for a stationary combustion turbine under this Regulation shall be determined:

(1) using a continuous emissions monitoring system
or
(2) using annual source testing according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures".

(e) If a source covered under this Regulation can burn more than one fuel, the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the sources testing required under this Regulation is not required for that fuel.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. June 1, 2008; July 15, 2002.
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009

2.1409 STATIONARY INTERNAL COMBUSTION ENGINES

(a) This regulation applies geographically according to MCAPCO Regulation 2.1402 – "Applicability".

(b) The owner or operator of a stationary internal combustion engine having a rated capacity of 650 horsepower or more that is not covered under Paragraph (c) of this Regulation or MCPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" shall not allow emissions of NO_x from the stationary internal combustion engine to exceed the following limitations:

MAXIMUM ALLOWABLE NO_X EMISSION RATES FOR STATIONARY INTERNAL COMBUSTION ENGINES (GRAMS PER HORSEPOWER HOUR)

Engine Type	Fuel Type	Limitation
Rich-burn	Gaseous	2.5
Lean-burn	Gaseous	2.5
Compression Ignition	Liquid	8.0

(c) Engines identified in the table in this Paragraph shall not exceed the emission limit in the table during the ozone season.

FACILITY	REGULATED SOURCES	ALLOWABLE EMISSIONS
None in Mecklenburg County	**N/A**	

(Note: State Rule identified Transcontinental Pipeline in table)
Compliance shall be determined by summing the actual emissions from the engines listed in the table at each facility for the ozone season and comparing those sums to the limits in the table. Compliance may be achieved through trading under Paragraph (g) of this Regulation if the trades are approved before the ozone season.

(d) If the emissions from that stationary internal combustion engine are greater than the applicable limitation in Paragraph (b) of this Regulation after reasonable effort as defined in MCAPCO Regulation 2.1401 - "Definitions", or if the requirements of this Regulation are not

RACT for the particular stationary internal combustion engine, the owner or operator may petition the Director for an alternative limitation or standard according to MCPCO Regulation 2.1412 - "Petitions for Alternative Limitations".

(e) For the engines identified in Paragraph (c) of this Regulation and any engine involved in emissions trading with one or more of the engines identified in Paragraph (c) of this Regulation, the owner or operator shall determine compliance using:

(1) a continuous emissions monitoring system which meets the applicable requirements of Appendices B and F of 40 CFR part 60 and MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring"; or

(2) an alternate monitoring and recordkeeping procedure based on actual emissions testing and correlation with operating parameters.

The installation, implementation, and use of this alternate procedure allowed under Subparagraph (e)(2) of this Paragraph shall be approved by the Director before it may be used. The Director may approve the alternative procedure if he finds that it can show the compliance status of the engine.

(f) If a stationary internal combustion engine is permitted to operate more than 475 hours during the ozone season, compliance with the limitation established for a stationary internal combustion engine under Paragraph (b) of this Regulation shall be determined using annual source testing according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures". If a source covered under this Regulation can burn more than one fuel, then the owner or operator of the source may choose not to burn one or more of these fuels during the ozone season. If the owner or operator chooses not to burn a particular fuel, the source testing required under this Regulation is not required for that fuel.

(g) If a stationary internal combustion engine is permitted to operate no more than 475 hours during the ozone season, the owner or operator of the stationary internal combustion engine shall show compliance with the limitation under Paragraph (b) of this Regulation with source testing during the first ozone season of operation according to MCAPCO Regulation 2.1415 - "Test Methods and Procedures". Each year after that, the owner or operator of the stationary internal combustion engine shall comply with the annual tune-up requirements of MCAPCO Regulation 2.1414 - "Tune-Up Requirements".

(h) The owner or operator of a source covered under Paragraph (c) of this Regulation may offset part or all of the emissions of that source by reducing the emissions of another stationary internal combustion engine at that facility by an amount equal to or greater than the emissions being offset. Only actual decreased emissions that have not previously been relied on to comply with MCAPCO (except for Sections 1.5700 - "Toxic Air Pollutants" and 2.1100 - "Control of Toxic Air Pollutants") or Title 40 of the Code of Federal Regulations may be used to offset the emissions of another source. The person requesting the offset shall submit the following information to the Director:

(1) identification of the source, including permit number, providing the offset and what the

new allowable emission rate for the source will be;
(2) identification of the source, including permit number, receiving the offset and what the new allowable emission rate for the source will be;
(3) the amount of allowable emissions in tons per ozone season being offset;
(4) a description of the monitoring, recordkeeping, and reporting that shall be used to show compliance; and
(5) documentation that the offset is an actual decrease in emissions that has not previously been relied on to comply with MCAPCO (except for Sections 1.5700 - "Toxic Air Pollutants" and 2.1100 - "Control of Toxic Air Pollutants") or Title 40 of the Code of Federal Regulations.

The Director may approve the offset if he finds that all the information required by this Paragraph has been submitted and that the offset is an actual decrease in emissions that have not previously been relied on to comply with MCAPCO (except for Sections 1.5700 - "Toxic Air Pollutants" and 2.1100 - "Control of Toxic Air Pollutants") or Title 40 of the Code of Federal Regulations. If the Director approves the offset, he shall put the new allowable emission rates in the respective permits.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Amendment Eff. November 1, 2000;
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. June 1, 2008; May 1, 2004; July 15, 2002.
Temporary Amendment Eff. December 31, 2008;
Temporary Amendment expired September 29, 2009

2.1410 EMISSIONS AVERAGING

(a) This Regulation shall not apply to sources covered under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines". Sources that have obtained an alternative limitation as provided by MCAPCO Regulation 2.1412 - "Petition for Alternative Limitations" or that apply seasonal fuel switching as provided by MCAPCO Regulation 2.1411 - "Seasonal Fuel Switching" are not eligible to participate in an emissions averaging plan under this Regulation.

(b) With the exceptions in Paragraph (a) of this Regulation, the owner or operator of a facility with two or more sources with comparable plume rise and subject to the requirements of this Section for all such sources as determined by MCAPCO Regulation 2.1402 - "Applicability" may elect to apply an emissions averaging plan according to Paragraph (c) of this Regulation. An emission averaging plan may be used if the total NO_x emissions from the averaged set of sources based on the total heat input are equal to or less than the NO_x emissions that would have occurred if each source complied with the applicable limitation.

(c) To request approval of an emissions averaging plan to comply with the requirements of this Section, the owner or operator of a facility shall submit a written request to the Director including

the following information:

(1) the name and location of the facility;
(2) information identifying each source to be included under the averaging plan;
(3) the maximum heat input rate for each source;
(4) the fuel or fuels combusted in each source;
(5) the maximum allowable NO_x emission rate proposed for each averaging source;
(6) a demonstration that the nitrogen oxide emissions of the sources being averaged when operated together at the maximum daily heat input rate, will be less than or equal to the total NO_x emissions if each source complied with the applicable limitation of this Section individually;
(7) an operational plan to provide reasonable assurance that the sources being averaged will satisfy Subparagraph (5) of this Paragraph when the combined maximum daily heat input rate is less than the permitted maximum heat input rate; and
(8) the method to be used to determine the actual NO_x emissions from each source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.107(a)(5), (7), (10);*
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Eff. April 1, 1995;
Amended Eff. January 1, 2009; July 15, 2002.
Temporary Amendment Eff. December 31 2008;
Temporary Amendment expired September 29, 2009

2.1411 SEASONAL FUEL SWITCHING

(a) This Regulation shall not apply to sources covered under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines".

(b) The owner or operator of a coal-fired or oil-fired boiler subject to the requirements of MCAPCO Regulation 2.1407 - "Boilers and Indirect-fired Process Heaters" may elect to comply by applying seasonal combustion of natural gas according to Paragraph (c) of this Regulation. This option is not available to a boiler that used natural gas as its primary fuel in or since 1990. Compliance with this Section according to this Regulation does not remove or reduce any applicable requirement of the Acid Rain Program.

(c) The owner or operator electing to comply with the requirements of this Section through the seasonal combustion of natural gas shall establish a NO_x emission limit beginning October 1 and ending April 30 that will result in annual NO_x emissions of less than or equal to the NO_x that would have been emitted if the source complied with the applicable limitation for the combustion of coal for the entire calendar year. Compliance with this Section according to this Regulation does not remove or reduce any applicable requirement of the Acid Rain Program.

(d) To comply with the requirements of this Section through the seasonal combustion of natural gas, the owner or operator shall submit to the Director the following information:

(1) the name and location of the facility;
(2) information identifying the source to use seasonal combustion of natural gas for compliance;
(3) the maximum heat input rate for each source;
(4) a demonstration that the source will comply with the applicable limitation for the combustion of coal during the ozone season
(5) a demonstration that the source will comply with the NO_x emission limitation established under Paragraph (c) of this Regulation beginning October 1 and ending April 30; and
(6) a written statement from the natural gas supplier providing reasonable assurance that the fuel will be available beginning during the ozone season.

History Note: *Authority G.S. 143-215.3(a)(1) 143-215.65; 143-215.107(a)(5), (7), (10); Eff. April 1, 1995;*
Temporary Amendment Eff November 1, 2000;
Amended Eff. April 1, 2001;
Temporary Amendment Eff December 31, 2008; August 1, 2001;
Amended Eff. June 1, 2008; July 15, 2002.
Temporary Amendment Eff. December 31 2008;
Temporary Amendment expired September 29, 2009

2.1412 PETITION FOR ALTERNATIVE LIMITATIONS

(a) If the owner or operator of a source subject to the requirements of MCAPCO Regulation 2.1407 - "Boilers and Indirect-Fired Process Heaters", 2.1408 - "Stationary Combustion Turbines", or 2.1409 - "Stationary Internal Combustion Engines" Paragraph (b):

(1) cannot achieve compliance with the applicable limitation after reasonable effort to satisfy the requirements of MCAPCO Regulations .MCAPCO Regulation 2.1407 - "Boilers and Indirect-Fired Process Heaters", 2.1408 - "Stationary Combustion Turbines", or 2.1409 - "Stationary Internal Combustion Engines" or if the requirements of MCAPCO Regulations 2.1407, 2.1408, or 2.1409 are not RACT for the particular source; and
(2) cannot provide reasonable assurance for overall compliance at a facility through the implementation of an emissions averaging plan as provided for in MCAPCO Regulation 2.1410 - "Emissions Averaging";

the owner or operator may petition the Director for an alternative limitation according to Paragraph (b) or (c) of this Regulation.

(b) To petition the Director for an alternative limitation, the owner or operator of the source shall submit;

(1) the name and location of the facility;
(2) information identifying the source for which an alternative limitation is being requested;
(3) the maximum heat input rate for the source;

(4) the fuel or fuels combusted in the source;
(5) the maximum allowable NO_x emission rate proposed for the source for each fuel;
(6) a demonstration that the source has satisfied the requirements to apply for an alternative limitation under Paragraph (a) of this Regulation; and
(7) a demonstration that the proposed alternative limitation is RACT for that source.

(c) If the source is required to comply with best achievable control technology under MCAPCO Regulation 2.0530 - "Prevention of Significant Deterioration", the owner or operator of the source shall provide the information required under Subparagraphs (b)(1) through (6) of this Regulation and documentation that the source is required to use best available control technology and is complying with that requirement. For this source, its best available control technology shall be considered RACT without any further demonstrations.

(d) The Director shall approve the alternative limitation if he finds that:
(1) all the information required by Paragraph (b) of this Regulation has been submitted,
(2) the requirements of Paragraph (a) of this Regulation have been satisfied, and
(3) the proposed alternative limitation is RACT for that source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.107(a)(5), (7), (10); Eff. April 1, 1995; Temporary Amendment Eff. August 1, 2001; November 1, 2000; Amendment Eff. June 1, 2008; July 15, 2002.*

2.1413 SOURCES NOT OTHERWISE LISTED IN THIS SECTION

(a) The owner or operator of any source of nitrogen oxides, except boilers, indirect-fired process heaters, stationary combustion turbines, or stationary internal combustion engines, at a facility that has the potential to emit 100 tons per year or more of nitrogen oxides or 560 pounds per calendar day or more from May 1 through September 30 shall apply RACT according to Paragraph (b) of this Regulation.

(b) To apply RACT to a source of nitrogen oxides covered under this Regulation, the owner or operator of the source shall submit;
(1) the name and location of the facility;
(2) information identifying the source for which RACT is being proposed;
(3) a demonstration that shows the proposed limitation is RACT for the source; and
(4) a proposal for demonstrating compliance with the proposed RACT.

(c) The Director shall approve the proposed limitation if he finds that:
(1) the owner or operator of the source has submitted all the information required under Paragraph (b),
(2) the sources is covered under this Regulation, and
(3) the proposed limitation is RACT for this source.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 15, 2002.

2.1414 TUNE-UP REQUIREMENTS

(a) This Regulation applies to boilers and indirect-fired process heaters subject to the requirements of MCAPCO Regulation 2.1407 - "Boilers and Indirect-fired Process Heaters" or stationary internal combustion engines subject to the requirements of MCAPCO Regulation 2.1409 - "Stationary Internal Combustion Engines" that are complying with MCAPCO Regulations 2.1407 - "Boilers and Indirect-fired Process Heaters" or 2.1409 - "Stationary Internal Combustion Engines" through an annual tune-up.

(b) When a tune-up to a boiler or indirect-fired process heater is required for compliance with this Section, the owner or operator shall at least annually and according to the manufacturer's recommendations:

(1) inspect each burner and clean or replace any component of the burner as required;
(2) inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NO_x and carbon monoxide;
(3) inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
(4) inspect any other component of the boiler or indirect-fired process heater and make adjustments or repairs as necessary to improve combustion efficiency.

The owner or operator shall perform the tune-up according to a unit specific protocol approved by the Director. The Director shall approve the protocol if it meets the requirements of this Regulation.

(c) When a tune-up to a stationary internal combustion engine is required for compliance with this Section, the owner or operator shall at least annually inspect , adjust, and repair or replace according to the manufacturer's recommendation, the following, as equipped:

(1) engine air cleaners, fuel filters, and water traps;
(2) turbochargers and superchargers;
(3) spark plugs;
(4) valve lash;
(5) ignition systems, including ignition coils and wiring;
(6) aftercooler cores;
(7) any other component of the engine as necessary to improve engine efficiency; and

(8) emission control systems.

The owner or operator shall perform the tune-up according to a unit specific protocol, including inspection, maintenance, and performance procedures as recommended by the manufacturer, approved by the Director. The Director shall approve the protocol if it meets the requirements of this Regulation.

(d) The owner or operator shall maintain records of tune-ups performed to comply with this Section according to MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring". The following information shall be included for each source:

(1) identification of the source;
(2) the date and time the tune-up started and ended;
(3) the person responsible for performing the tune-up;
(4) for boilers and indirect-fired process heaters, the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler or indirect-fired process heater identified in the protocol, noting any repairs or replacements made;
(5) for stationary internal combustion engines, the checklist for engine air cleaners, turbochargers, sparkplugs, valve lash, ignition coils and wiring, aftercooler cores, and all other components of the engine identified in the protocol, noting any repairs or replacements made.
(6) any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, indirect-fired process heater, or stationary internal combustion engine have been optimized with respect to fuel consumption and output; at a minimum these parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and
(7) any other information requested by the Director to show that the boiler, indirect-fired process heater, or stationary internal combustion engine is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001; November 1, 2000;
Amended Eff. July 15, 2002.

2.1415 TEST METHODS AND PROCEDURES

(a) When source testing is used to determine compliance with regulations in this Section, the methods and procedures in Section 2.2600 of this Article shall be used.

(b) The owner or operator shall maintain records of tests performed to demonstrate compliance with this Section according to MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring".

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Amendment Eff. November 1, 2000;
Eff. April 1, 1995;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. June 1, 2008; July 15, 2002.

2.1416 EMISSION ALLOCATIONS FOR UTILITY COMPANIES (REPEALED)

History Note: *Authority G.S. 143-215.3(a)(1); 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Eff. April 1, 2001;
Temporary Amendment Eff. August 1, 2001;
Amended Eff. May 1, 2004; July 15, 2002.
Repealed Eff. January 1, 2009
Temporary Amendment Eff. December 31 2008;
Temporary Amendment expired September 29, 2009

2.1417 EMISSION ALLOCATIONS FOR LARGE COMBUSTION SOURCES (REPEALED)

History Note: Authority G.S. 143-215.3(a)(1);143-215.107(a)(5), (7), (10);
Temporary Adoption Eff. November 1, 2000;
Temporary Amendment Eff. August 1, 2001;
Eff. July 15, 2002;
Amended Eff. May 1, 2004.
Repealed Eff. January 1, 2009
Temporary Amendment Eff. December 31 2008;
Temporary Amendment expired September 29, 2009

2.1418 NEW ELECTRIC GENERATING UNITS, LARGE BOILERS, AND LARGE I/C ENGINES

(a) Electric generating units. Emissions of nitrogen oxides from any fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system permitted after October 31, 2000, serving a generator with a nameplate capacity greater than 25 megawatts electrical and selling any amount of electricity shall not exceed:

(1) 0.15 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels if it is not covered under MCAPCO Regulation 2.0530 - "Prevention of Significant Deterioration" or 2.0531 - "Sources In Nonattainment Areas";

(2) 0.15 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels or best available control technology requirements of MCAPCO Regulation 2.0530, whichever requires the greater degree of reduction, if it is covered under MCAPCO Regulation 2.0530;
or

(3) lowest achievable emission rate technology requirements of MCAPCO Regulation 2.0531 if it is covered under MCAPCO Regulation 2.0531.

(b) Large boilers. Emissions of nitrogen oxides from any fossil fuel-fired stationary boiler, combustion turbine, or combined cycle system having a maximum design heat input greater than 250 million Btu per hour which is permitted after October 31, 2000, and not covered under Paragraph (a) of this Regulation, shall not exceed:

(1) 0.17 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels if it is not covered under MCAPCO Regulation 2.0530 - "Prevention of Significant Deterioration" or Regulation 2.0531 - "Sources In Nonattainment Areas";

(2) 0.17 pounds per million Btu for gaseous and solid fuels and 0.18 pounds per million Btu for liquid fuels or best available control technology requirements of MCAPCO Regulation 2.0530, whichever requires the greater degree of reduction, if it is covered under MCAPCO Regulation 2.0530;
or

(3) lowest achievable emission rate technology requirements of MCAPCO Regulation 2.0531 if it is covered under MCAPCO Regulation 2.0531.

(c) Internal combustion engines. The following reciprocating internal combustion engines permitted after October 31, 2000, shall comply with the applicable requirements in MCAPCO Regulation 2.1423 - "Large Internal Combustion Engines" if the engine is not covered under MCAPCO Regulation 2.0530 - "Prevention of Significant Deterioration" or Regulation 2.0531 - "Sources In Nonattainment Areas":

(1) rich burn stationary internal combustion engines rated at equal to or greater than 2,400 brake horsepower,

(2) lean burn stationary internal combustion engines rated at equal to or greater than 2,400 brake horsepower,

(3) diesel stationary internal combustion engines rated at equal to or greater than 3,000 brake horsepower, or
(4) dual fuel stationary internal combustion engines rated at equal or to greater than 4,400 brake horsepower,

If the engine is covered under MCAPCO Regulation 2.0530, it shall comply with the requirements of MCAPCO Regulation 2.1423 - "Large Internal Combustion Engines" or the best available control technology requirements of MCAPCO Regulation 2.0530, whichever requires the greater degree of reduction. If the engine is covered under MCAPCO Regulation 2.0531, it shall comply with lowest achievable emission rate technology requirements of MCAPCO Regulation 2.0531.

(d) Monitoring. The owner or operator of a source subject to this Regulation except internal combustion engines shall show compliance using a continuous emission monitor that meets the requirements of MCAPCO Regulation 2.1404 "Recordkeeping: Reporting: Monitoring" Paragraph (d). Internal combustion engines shall comply with the monitoring requirements in MCAPCO Regulation 2.1423 - "Large Internal Combustion Engines". Monitors shall be installed before the first ozone season in which the source will operate and shall be operated each day during the ozone season that the source operates.

History Note: *Authority G.S. 143-215.3(a)(1);143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Temporary Amendment Eff. August 1, 2001;
Eff. July 15, 2002;
Amended Eff. January 1, 2009; June 1, 2004.
Temporary Amendment Eff. December 31 2008;
Temporary Amendment expired September 29, 2009

2.1419 NITROGEN OXIDE BUDGET TRADING PROGRAM

(a) Definitions. For the purposes of this Regulation, the definitions in 40 CFR 96.2 shall apply except that:

(1) **"Permitting agency"** means Mecklenburg County Air Quality.

(2) **"Fossil fuel fired"** means fossil fuel fired as defined under MCAPCO Regulation 2.1401 - "Definitions" instead of the definition in 40 CFR 96.2.

(b) Existing sources. Sources covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies" or Regulation 2.1417 - "Emissions Allocations for Large Combustion Sources" shall comply with the requirements of MCACPO Regulation 2.1416 or 2.1417 using the procedures of and complying with the requirements of 40 CFR Part 96, Nitrogen Oxide Budget Trading Program for State Implementation Plans, with the following exceptions:

(1) Permit applications shall be submitted following the procedures and schedules in this Section and in Sections MCAPCO 1.5200 - "Air Quality Permits" and 1.5500 - "Title V Procedures" instead of the procedures and schedules in 40 CFR Part 96; and

(2) The dates and schedules for monitoring systems in 40 CFR Part 96 shall not apply; however, if a source operates during the ozone season, it shall have installed and begun operating by May 1, 2004, a continuous emissions monitoring system that complies with 40 CFR Part 96.

(c) New sources. Except for internal combustion engines, sources covered under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" shall comply with the requirements of MCAPCO Regulation 2.1418 using the procedures of and complying with the requirements of 40 CFR Part 96, Budget Trading Program for State Implementation Plans, with the following exceptions:

(1) Permit applications shall be submitted following the procedures and schedules in this Section and in Section 1.5500 - "Title V Procedures" instead of the procedures and schedules in 40 CFR Part 96; and

(2) The dates and schedules for monitoring systems in 40 CFR Part 96 shall not apply; however, a source shall not operate during the ozone season until it has installed and is operating a continuous emissions monitoring system that complies with 40 CFR Part 96.

(d) Opt-in provisions. Boilers, turbines, and combined cycle systems not covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies" or Regulation 2.1417 - "Emissions Allocations for Large Combustion Sources" or internal combustion engines may opt into the budget trading program of 40 CFR Part 96 by following the procedures and requirements of 40 CFR Part 96, Subpart I, including using continuous emission monitors that meet the requirements of 40 CFR Part 75, Subpart H. Before an internal combustion engine opts into the budget trading program, the owner or operator of the engine shall demonstrate that the continuous emissions monitor on the engine can comply with the requirements of 40 CFR Part 75, Subpart H, by operating the monitor on the engine under the conditions specified in 40 CFR Part 75 for at least one ozone season before opting into the budget trading program.

(e) Departmental requirements. The Director and MCAQ shall follow the procedures of 40 CFR Part 96 in reviewing permit applications and issuing permits for NO_x Budget sources, in approving or disapproving monitoring systems for NO_x Budget sources, and in taking enforcement action against NO_x Budget sources. The Director may issue permits after May 1, 2003, for sources covered under this Section that are participating in the nitrogen oxide budget trading program under this Section. The provisions of 40 CFR Part 96 pertaining to early reduction credits shall not apply.

(f) Submitting emissions allocations to the EPA. For sources covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies" or Regulation 2.1417 - "Emissions Allocations for Large Combustion Sources", the Director shall submit to the Administrator of the Environmental Protection Agency NO_x emissions allocations according to 40 CFR Part 96. The Environmental Management Commission and the Director of the North Carolina Department of Environment and Natural Resources shall follow MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies", Regulation 2.1417 - "Emissions Allocations for Large Combustion Sources" and Regulation 2.1420 - "Periodic Review and Reallocation" for emissions allocations instead of the methodology specified in 40 CFR Part 96. The Environmental Management Commission and the Director of the North Carolina Department of Environment and Natural Resources shall follow, MCAPCO Regulation 2.1421 - "Allocations for New Growth of Major Point Sources" for set-asides and new source allocations instead of the provisions of 40 CFR Part 96. The Environmental Management Commission and the Director of the North Carolina Department of Environment and Natural Resources shall follow MCAPCO Regulation 2.1422 - "Compliance Supplement Pool Credits" for distributing the compliance supplement pool instead of the provisions of 40 CFR Part 96.

(g) EPA to administer. The United States Environmental Protection Agency (EPA) shall administer the budget trading program of 40 CFR Part 96 on behalf of North Carolina. The Director of the North Carolina Department of Environment and Natural Resources shall provide the EPA the information necessary under 40 CFR Part 96 for the EPA to administer 40 CFR Part 96 on behalf of North Carolina. The owner or operator of each source covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies", Regulation 2.1417 - "Emissions Allocations for Large Combustion Sources", or Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines", except internal combustion engines, of this Section shall establish an account, designate an authorized account representative, and comply with the other requirements of 40 CFR Part 96 as necessary for the EPA to administer the nitrogen oxide budget trading program on behalf of North Carolina.

(h) Restrictions on trading. NO_x emissions allocations obtained under this Regulation shall not be used to meet the emission limits for a source if compliance with that emission limit is required as part of the State Implementation Plan to attain or maintain the ambient air quality ozone standard. Sources covered under MCAPCO Regulation 2.0531 - "Sources in Nonattainment Areas" shall not use the nitrogen oxide budget trading program to comply with MCAPCO

Regulation 2.0531.

History Note: *Statutory Authority G.S. 143-215.3(a)(1);143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Temporary Amendment Eff. August 1, 2001;
Eff. July 15, 2002.
Amended Eff. May 1, 2004.
Temporary Amendment Eff. December 31 2008;

2.1420 PERIODIC REVIEW AND REALLOCATIONS

(a) Periodic Review. In 2009 and every five years thereafter, the Environmental Management Commission shall review the emission allocations of sources covered under MCAPCO Regulation 2.1416 - "Emission Allocations for Utility Companies", 2.1417 - "Emissions Allocations for Large Combustion Sources", or 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" and decide if any revisions are needed. In making this decision the Environmental Management Commission shall consider the following:

(1) the size of the allocation pool for new source growth under MCAPCO Regulation 2.1421 - "Allocations for New Growth of Major Point Sources";
(2) the amount of emissions allocations requested under MCAPCO Regulation 2.1421;
(3) the amount of emissions allocations available through nitrogen oxide budget trading program;
(4) the impact of reallocation on existing sources;
(5) the impact of reallocations on sources covered under MCAPCO Regulation 2.1421;
(6) impact on future growth; and
(7) other relevant information on the impacts of reallocation.

(b) If the Environmental Management Commission decides to revise emission allocations, it shall propose for each source that has been permitted for and has complied with an emission rate of 0.10 pounds per million Btu or less, emission allocations greater than or equal to the greater of:

(1) the source's current allocation, or
(2) an allocation calculated by multiplying the average of the source's two highest seasonal energy inputs for the four most recent years by 0.15 pounds per million Btu and dividing by 2000.

(c) Posting of emission allocations. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall post the new emission allocations once they are adopted on the Division's web page.

History Note: *Statutory Authority G.S. 143-215.3(a)(1);143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;

Temporary Amendment Eff. August 1, 2001;
Eff. July 15, 2002.
Temporary Amendment Eff. December 31 2008;

2.1421 ALLOCATIONS FOR NEW GROWTH OF MAJOR POINT SOURCES

(a) Purpose. The purpose of this Regulation is to establish an allocation pool from which emission allocations of nitrogen oxides may be allocated to sources permitted after October 31, 2000.

(b) Eligibility. This Regulation applies only to the following types of sources covered under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines", and permitted after October 31, 2000:

(1) fossil fuel-fired stationary boilers, combustion turbines, or combined cycle systems serving a generator with a nameplate capacity greater than 25 megawatts electrical and selling any amount of electricity; or
(2) fossil fuel-fired stationary boilers, combustion turbines, or combined cycle systems having a maximum design heat input greater than 250 million Btu per hour that are not covered under Subparagraph (1) of this Paragraph;

(c) Requesting allocation. To receive emission allocations under this Regulation, the owner or operator of the source shall provide the following written documentation to the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality before January 1 of the year preceding the ozone season for which the emission allocation is sought:

(1) a description of the combustion source or sources including heat input;
(2) evidence that the source complies with the emission limit under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines";
(3) an estimate of the actual emissions of nitrogen oxides in tons per ozone season;
(4) the expected hours of operation during the ozone season;
(5) the date on which the source is expected to begin operating if it is not already operating;
(6) the tons per ozone season of emission allocations being requested (the amount requested shall be the lesser of the estimated actual emissions under Subparagraph (3) of this Paragraph or the product of the emission limit under MCAPCO Regulation 2.1418 times the maximum design heat input in millions of Btu per hour times the number of hours that the source is projected to operate (not to exceed 3672 hours) divided by 2000); and
(7) a description of the monitoring, recordkeeping, and reporting plan that will assure continued compliance.

(d) Approving requests. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall approve a request for emissions allocation if he

finds that:

(1) All the information and documentation required under Paragraph (c) of this Regulation has been submitted;
(2) The request was received before January 1;
(3) The source is eligible for emission allocations under this Regulation;
(4) The source complies with MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines";
(5) The requested emission allocations do not exceed the estimated actual emissions of nitrogen oxides;
(6) The source has or is likely to have an air quality permit before the end of the upcoming ozone season; and
(7) The source is operating or is scheduled to begin operating before the end of the upcoming ozone season.

(e) Preliminary allocations. By March 1 before each ozone season, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall have calculated and posted on the Division's web page preliminary emission allocations for sources whose requests under this Regulation he has approved. Preliminary emission allocations shall be determined as follows:

(1) If the emission allocations requested do not exceed the amount in the pool, each source shall have a preliminary allocation equal to its request.
(2) If the emission allocations requested exceed the amount in the pool, each source's emission allocations shall be calculated as follows:
    (A) For each source, its maximum design heat input in millions of Btu per hour is multiplied by the number of hours that the source is projected to operate not to exceed 3672 hours; this product is the source's seasonal heat input;
    (B) The seasonal heat inputs calculated under Part (A) of this Subparagraph are summed.
    (C) For each source, its seasonal heat input calculated under Part (A) of this Subparagraph is multiplied by the tons of emission allocations in the allocation pool and divided by the sum of seasonal heat inputs calculated under Part (B) of this Subparagraph; this amount is the source's preliminary emission allocations.

The preliminary emission allocations computed under this Paragraph may be revised under Paragraph (f) of this Regulation after the ozone season. Emissions allocations issued under this Paragraph are solely for planning purposes and are not reported to the EPA to be recorded in allowance tracking system account. The emission allocations granted under Paragraph (f) of this Regulation shall be the emission allocations granted the source to offset its emissions.

(f) Final allocations. According to Paragraph (g) of this Regulation, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall grant emission allocations for each source for which he has approved an allocation from the allocation

pool as follows:

(1) For each individual source, its allowable emission rate under MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" is multiplied by its heat input during the ozone season. This product is divided by 2000.

(2) The lesser of the source's actual emissions of nitrogen oxides, the value calculated under Subparagraph (1) of this Paragraph, or the preliminary emission allocations determined under Paragraph (e) of this Regulation shall be the source's emission allocation from the allocation pool.

Emissions allocations granted under this Paragraph are reported to the EPA to be recorded in allowance tracking system account.

(g) Issuance of final allocations. By November 1 following each ozone season, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall issue final allocations according to Paragraph (f) of this Regulation and shall notify each source that receives an allocation of the amount of allocation that it has been granted. By November 1 following the ozone season, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall also notify the EPA of allocations issued and to whom they have been issued and the amount issued to each source. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall post the final allocations on the Division's web page.

(h) Allocation pool.

(1) Before the EPA promulgation of revisions after November 1, 2000, to 40 CFR Part 51, Subpart G, revising the nitrogen oxide budget for North Carolina, the allocation pool shall contain the following:

(A) in 2004, 122 tons,

(B) in 2005, 599 tons plus emission allocations carried over from the previous year;

(C) in 2006, 505 tons plus emission allocations carried over from the previous year; and

(D) in 2007, 1,058 tons plus emission allocations carried over from the previous year.

(2) After the EPA promulgates revisions after November 1, 2000, to 40 CFR Part 51, Subpart G, revising the nitrogen oxide budget for North Carolina, the allocation pool shall contain the following:

(A) in 2004, 122 tons,

(B) in 2005, 78 tons plus emission allocations carried over from the previous year;

(C) in 2006, 1117 tons plus emission allocations carried over from the previous year; and

(D) in 2007 and each year thereafter trough 2009, 1670 tons plus emission allocations carried over from the previous year.

(i) Changes in the allocation pool. By June 28, 2009, the North Carolina Environmental Management Commission shall develop and adopt through rulemaking allocations for 2010 and later years.

(j) Carryover. Emission allocations remaining in the allocation pool at the end of the year shall be carried over into the next year for use during the next ozone season.

(k) Future requests. Once the owner or operator of a source has made a request under this Regulation for emission allocations from the allocation pool, he does not have to request emission allocations under this Regulation in future years. The request shall automatically be included in following years as long as the source remains eligible for emission allocations under this Regulation.

(l) Loss of eligibility. Once a source receives emission allocations under MCAPCO Regulation 2.1420 - "Periodic Review and Reallocations", it shall no longer be eligible for emission allocations under this Regulation.

(m) Use of allocation. Allocations granted under this Regulation apply only to the ozone season immediately preceding the issuance of final allocations under Paragraph (g) of this Regulation. Allocations issued under Paragraph (g) of this Regulation for use in one year do not carry forward into any following ozone season. Allocations granted under this Regulation shall be calculated for each ozone season.

History Note: *Statutory Authority G.S. 143-215.3(a)(1);143-215.65; 143-215.66; 143 215.107(a)(5), (7), (10);*
Temporary Adoption Eff. November 1, 2000;
Temporary Amendment Eff. August 1, 2001;
Eff. July 15, 2002.
Temporary Amendment Eff. December 31 2008;

2.1422 COMPLIANCE SUPPLEMENT POOL CREDITS

(a) Purpose. The purpose of this Regulation is to regulate North Carolina's eligibility for and use of the Compliance Supplement Pool under 40 CFR 51.121(e)(3).

(b) Eligibility. Sources covered under MCAPCO Regulation 2.1416 - "Emissions Allocations for Utility Companies" may earn Compliance Supplement Pool Credits for those nitrogen oxide emissions reductions required by MCAPCO Regulation 2.1416 that are achieved during the ozone season after September 30, 1999 and are demonstrated using baseline and current emissions determined according to 40 CFR Part 75 before May 1, 2003, and are beyond the total emission reductions required under 40 CFR Part 76 or any other provision of the federal Clean Air Act.

(c) Credits. The Compliance Supplement Pool Credits earned under this Regulation shall be

tabulated in tons of nitrogen oxides reduced per ozone season. The control device, modification, or change in operational practice that enables the combustion source or sources to achieve the emissions reductions shall be permitted. The facility shall provide MCAQ and the North Carolina Department of Natural Resources - Division of Air Quality with written notification certifying the installation and operation of the control device or the modification or change in operational practice that enables the combustion source or sources to achieve the emissions reduction. Only emissions reductions that are beyond emissions reductions required under 40 CFR Part 76 or any other provision of the federal Clean Air Act are creditable Compliance Supplement Pool Credits. Credits are counted in successive seasons through May 1, 2003. Seasonal credits shall be recorded in a Division of Air Quality database and will accumulate in this database until May 1, 2003. At that point a cumulative total of all the Compliance Supplement Pool Credits earned during the entire period shall be tabulated. These credits will then be available for use by the State of North Carolina to achieve compliance with the State ozone season NOx budget.

(d) Requesting credits. In order to earn Compliance Supplement Pool Credits, the owner or operator of the facility shall provide the following written documentation to the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality and to the Director of Mecklenburg County Air Quality before January 1, 2003.

(1) the combustion source or sources involved in the emissions reduction;
(2) the start date of the emissions reduction;
(3) a description of the add-on control device, modification, or change in operational practice that enables the combustion source or sources to achieve the emissions reduction;
(4) the current and baseline emissions of nitrogen oxides of the combustion source or sources involved in this reduction in terms of tons of nitrogen oxides per season;
(5) the amount of reduction of emissions of nitrogen oxides achieved by this action in tons of nitrogen oxides per season per combustion source involved;
(6) the total reduction of nitrogen oxides achieved by this action in tons of nitrogen oxides per season for all the combustion sources involved;
(7) a demonstration that the proposed action has reduced the emissions of nitrogen oxides from the combustion sources involved by the amount specified in Subparagraphs (d)(5) and (d)(6) of this Regulation; and
(8) a description of the monitoring, recordkeeping, and reporting plan used to ensure continued compliance with the proposed emissions reduction activity; continuous emissions monitors shall be used to monitor emissions.

(e) Approving requests. Before any Compliance Supplement Pool Credits can be allocated, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall have to approve them. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall approve credits if he finds that:

(1) early emissions reductions are demonstrated using baseline and current emissions determined according to 40 CFR Part 75 to be beyond the reductions required under

40 CFR Part 76, Acid Rain Nitrogen Oxides Emission Reduction Program and any other requirement of the federal Clean Air Act;

(2) the emission reductions are achieved after September 30, 1999, and before May 1, 2003, and

(3) all the information and documentation required under Paragraph (d) have been submitted.

The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall notify the owner or operator of the source and EPA of his approval or disapproval of a request and of the amount of Compliance Supplement Pool Credits approved. If the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality disapproves a request or part of a request, he shall explain in writing to the owner or operator of the source the reasons for disapproval.

(f) Compliance supplement pool. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall verify that the Compliance Supplement Pool Credits do not exceed a statewide total of 10,737 tons for all the ozone seasons of the years 2003, 2004, and 2005.

(g) Interim report. The owner or operators of the facility shall submit to the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality by January 1, 2001 and January 1, 2002, an interim report that contains the information in Paragraph (d) of this Regulation for the previous ozone season.

(h) Recording credits. Based on the interim reports submitted under Paragraph (g) of this Regulation, the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall record the Compliance Supplement Pool Credits earned under this Regulation in a central database. The North Carolina Department of Environment and Natural Resources - Division of Air Quality shall maintain this database. These credits shall be recorded in tons of emissions of nitrogen oxides reduced per season with the actual start date of the reduction activity. Based on the final formal request submitted under Paragraph (d) of this Regulation as approved under Paragraph (e) of this Regulation, the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall finalize the Compliance Supplement Pool Credits earned and record the final earned credits in the Division's database.

(i) Use of credits. Final earned Compliance Supplement Pool Credits shall be available for Carolina Power & Light Co. and Duke Power Co. to use in 2003. The allocations of Carolina Power & Light Co.'s sources and Duke Power Co.'s sources in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" shall be reduced for 2004 or 2005 by the amount of Compliance Supplement Pool Credits used in 2003 using the procedures in Paragraph (k) of this Regulation. Compliance Supplement Pool Credits not used in 2003 shall be available for use by the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality to offset excess emissions of nitrogen oxides in order to achieve compliance with the North Carolina ozone season NOx budget after May 30, 2004, but no later than September 30,

2005. The credits shall be used on a one for one basis, that is, one ton per season of credit can be used to offset one ton, or less, per season of excess emissions to achieve compliance with the requirements of 15A NCAC 2D Rule .1416 or Rule .1417 - "Emission Allocations for Large Combustion Sources". All credits shall expire and will no longer be available for use after November 30, 2005.

(j) Reporting. The Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality shall report:

(1) to the EPA, Carolina Power & Light Co. and Duke Power Co. by
    (A) March 1, 2003 the Compliance Supplement Pool Credits earned by Carolina Power & Light Co. and by Duke Power Co., and
    (B) March 1, 2004 the reductions in allocations calculated under Paragraphs (k) and (l) of this Regulation; and
(2) to the EPA by:
    (A) December 1, 2003, the Compliance Supplement Pool Credits used beginning May 1 through September 30, 2003,
    (B) December 1, 2004, the Compliance Supplement Pool Credits used beginning May 31 through September 30, 2004, and
    (C) December 1, 2005, the Compliance Supplement Pool Credits used beginning May 1 through September 30, 2005.

(k) Using Compliance Supplement Pool Credits in 2003. Carolina Power & Light Co. and Duke Power Co. may use Compliance Supplement Pool Credits in 2003. If they do use Compliance Supplement Pool Credits in 2003, then the allocations for their sources in 15A NCAC 2D Rule .1416 - "Emission Allocations for Utility Companies" shall be reduced for 2004 or 2005 by the amount of Compliance Supplement Pool Credits used in 2003. Before the Director of the North Carolina Department of Environment and Natural Resources - Division of Air Quality approves the use of Compliance Supplement Pool Credits in 2003, the company shall identify the sources whose allocations are to be reduced to offset the Compliance Supplement Pool Credits requested for 2003 and the year (2004 or 2005) in which the allocation is reduced. The Director shall approve no more than 4,295 tons for Carolina Power & Light Co. and no more than 6,442 tons for Duke Power Co. The Director shall approve no more than 5,771 tons being offset by reductions in allocations in 2004 and no more than 4,966 tons being offset by reductions in allocations in 2005.

(l) Failure to receive sufficient credits. If the sum of Compliance Supplement Pool Credits received by Carolina Power & Light Co. and Duke Power Co. is less than 10,737 tons, the following procedure shall be used to reduce the allocations in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies":

(1) If the Compliance Supplement Pool Credits received by Carolina Power & Light Co. are less than 4,295 tons, and the Compliance Supplement Pool Credits received by Duke Power Co. are greater than or equal to 6,442 tons, the allocation for Carolina Power & Light Co.'s sources shall be reduced by the amount obtained by subtracting

from 10,737 tons the sum of Compliance Supplement Pool Credits received by Carolina Power & Light Co. and Duke Power Co. The allocations of Carolina Power & Light Co.'s sources shall be reduced using the procedure in Subparagraph (4) of this Paragraph.

(2) If the Compliance Supplement Pool Credits received by Duke Power Co. are less than 6,442 tons, and the Compliance Supplement Pool Credits received by Carolina Power & Light Co. are greater than or equal to 4,295 tons, the allocation for Duke Power Co.'s sources shall be reduced by the amount obtained by subtracting from 10,737 tons the sum of Compliance Supplement Pool Credits received by Carolina Power & Light Co. and Duke Power Co. The allocations of Duke Power Co.'s sources shall be reduced using the procedure in Subparagraph (4) of this Paragraph.

(3) If the Compliance Supplement Pool Credits received by Carolina Power & Light Co. are less than 4,295 tons, and the Compliance Supplement Pool Credits received by Duke Power Co. are less than 6,442 tons:

(A) The allocation for Carolina Power & Light Co.'s sources shall be reduced by the amount obtained by subtracting from 4,295 tons the Compliance Supplement Pool Credits received by Carolina Power & Light Co. The allocations of Carolina Power & Light Co.'s sources shall be reduced using the procedure in Subparagraph (4) of this Paragraph; and

(B) The allocation for Duke Power Co.'s sources shall be reduced by the amount obtained by subtracting from 6,442 tons the Compliance Supplement Pool Credits received by Duke Power Co. The allocations of Duke Power Co.'s sources shall be reduced using the procedure in Subparagraph (4) of this Paragraph.

(4) When the allocations in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" for Carolina Power & Light Co.'s sources or for Duke Power Co.'s sources are required to be reduced, the following procedure shall be used:

(A) If the reduction required is less than or equal to 4,966 tons, then the following procedure shall be used:

(i) The allocations of all sources listed in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" for 2005 for Carolina Power & Light Co. or Duke Power Co. are summed.

(ii) The reduction required under Subparagraph (1), (2), or (3) of this Paragraph is subtracted from the sum computed under Subpart (i) of this Part.

(iii) The allocation of each source listed in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" for 2005 for Carolina Power & Light Co. or Duke Power Co. is multiplied by the value computed under Subpart (ii) of this Part and divided by the value computed under Subpart (i) of this Part. The result is the revised allocation for that source.

(B) If the reduction required is more than 4,966 tons, then the following procedure shall be used:

(i) The reduction for the allocations for 2005 is determined using the

procedure under Part (A) of this Subparagraph and substituting 4,966 as the reduction required under Subpart (A)(ii) of this Subparagraph.

(ii) The reduction for the allocations for 2004 shall be determined using the following procedure:

(I) The reduction required under Subparagraph (1), (2), or (3) of this Paragraph is subtracted from 4,966.

(II) The allocations of all sources listed in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" for 2004 for Carolina Power & Light Co. or Duke Power Co. for 2004 are summed.

(III) The allocation of each source listed in 15A NCAC 2D Rule.1416 - "Emission Allocations for Utility Companies" for 2004 for Carolina Power & Light Co. or Duke Power Co. is multiplied by the value computed under Sub-Subpart (I) of this Subpart and divided by the value computed Sub-Subpart (II) of this Subpart. The result is the revised allocation for that source.

(m) If allocations are reduced in 2004 or 2005 for Carolina Power & Light Co. or Duke Power Co. under Paragraph (k) or (l) of this Regulation, the company whose allocations are reduced shall reduce its allocations by returning allowances through the use of allowance transfers to the State following the procedures in 40 CFR Part 96. These allowances shall be retired.

History Note: *Statutory Authority G.S. 143-215.3(a)(1);143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. August 1, 2001;
Eff. July 15, 2002;
Amended Eff. May 1, 2004.
Temporary Amendment Eff. December 31 2008;

2.1423 LARGE INTERNAL COMBUSTION ENGINES

(a) Applicability. This Regulation applies to the following internal combustion engines permitted after October 30, 2000 that are subject to MCAPCO Regulation 2.1418 - "New Electric Generating Units, Large Boilers, and Large I/C Engines" but are not subject to MCAPCO Regulation 2.0530 - "Prevention of Significant Deterioration or 2.0531 - "Sources in Nonattainment Areas":

(1) rich burn stationary internal combustion engines rated at equal or greater than 2,400 brake horsepower,

(2) lean burn stationary internal combustion engines rated at equal or greater than 2,400 brake horsepower,

(3) diesel stationary internal combustion engines rated at equal or greater than 3,000 brake horsepower, or

(4) dual fuel stationary internal combustion engines rated at equal or greater than 4,400

brake horsepower,

(b) Emission limitation. The owner or operator of a stationary internal combustion engine shall not cause to be emitted into the atmosphere nitrogen oxides in excess of the following applicable limit, expressed as nitrogen dioxide corrected to 15 percent parts per million by volume (ppmv) stack gas oxygen on a dry basis, averaged over a rolling 30-day period, as may be adjusted under Paragraph (c) of this Regulation:

MAXIMUM ALLOWABLE EMISSION CONCENTRATION FOR
STATIONARY INTERNAL COMBUSTION ENGINES
(parts per million)

Engine Type	Limitation
Rich-burn	110
Lean-burn	125
Diesel	175
Dual fuel	125

(c) Adjustment. Each emission limit expressed in Paragraph (b) of this Regulation may be multiplied by X, where X equals the engine efficiency (E) divided by a reference efficiency of 30 percent. Engine efficiency (E) shall be determined using one of the methods specified in Subparagraph (1) or (2) of this Paragraph, whichever provides a higher value. However, engine efficiency (E) shall not be less than 30 percent. An engine with an efficiency lower than 30 percent shall be assigned an efficiency of 30 percent.

(1) $$E = \frac{(\text{Engine output}) * (100)}{\text{Energy input}}$$

where energy input is determined by a fuel measuring device accurate to plus or minus 5 percent and is based on the higher heating value (HHV) of the fuel. Percent efficiency (E) shall be averaged over 15 consecutive minutes and measured at peak load for the applicable engine.

(2) $$E = \frac{(\text{Manufacturer's Rated Efficiency [continuous] at LHV}) * \text{LHV}}{\text{(HHV)}}$$

where LHV is the lower heating value of the fuel; and HHV is the higher heating value of the fuel.

(d) Compliance determination and monitoring. The owner or operator of an internal combustion engine subject to the requirements of this Regulation shall determine compliance using:

(1) a continuous emissions monitoring system (CEMS) which meets the applicable requirements of Appendices B and F of 40 CFR part 60, excluding data obtained

during periods specified in Paragraph (g) of this Regulation and MCAPCO Regulation 2.1404 - "Recordkeeping: Reporting: Monitoring"; or

(2) an alternate calculated and recordkeeping procedure based on actual emissions testing and correlation with operating parameters. The installation, implementation, and use of this alternate procedure shall be approved by the Director before it may be used. The Director may approve the alternative procedure if he finds that it can show the compliance status of the engine.

(e) Reporting requirements. The owner or operator of a stationary internal combustion engine subject to this Regulation shall submit:

(1) a report documenting the engine's total nitrogen oxide emissions beginning May 1 and ending September 30 of each year to the Director by October 31 of each year, beginning with the year of first ozone season that the engine operates.

(2) an excess emissions and monitoring systems performance report, according to the requirements of 40 CFR 60.7(c) and 60.13, if a continuous emissions monitoring system is used.

(f) Recordkeeping requirements. The owner or operator of a stationary internal combustion engine subject to this Regulation shall maintain all records necessary to demonstrate compliance with the Regulation for two calendar years at the facility at which the engine is located. The records shall be made available to the Director upon request. The owner or operator shall maintain records of the following information for each day the engine operates:

(1) identification and location of the engine;
(2) calendar date of record;
(3) the number of hours the engine operated during each day, including startups, shutdowns, and malfunctions, and the type and duration of maintenance and repairs;
(4) date and results of each emissions inspection;
(5) a summary of any emissions corrective maintenance taken;
(6) the results of all compliance tests;
(7) if a unit is equipped with a continuous emission monitoring system:
    (A) identification of time periods during which nitrogen oxide standards are exceeded, the reason for the excess emissions, and action taken to correct the excess emissions and to prevent similar future excess emissions; and
    (B) identification of the time periods for which operating conditions and pollutant data were not obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.

(g) Exemptions. The emission standards of this Regulation shall not apply to the following periods of operation:

(1) start-up and shut-down periods and periods of malfunction, not to exceed 36 consecutive hours;
(2) regularly scheduled maintenance activities.

History Note: *Statutory Authority G.S. 143-215.3(a)(1);143-215.65; 143-215.66; 143-215.107(a)(5), (7), (10);*
Temporary Adoption Eff. August 1, 2001;
Eff. July 15, 2002.